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UNITED STATE PATENT AND TRADEMARK OFFICE**

LIMITED RECOGNITION UNDER 37 CFR § 10.9(b)

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This document constitutes proof of such recognition. The original of this document is on file in the Office of Enrollment and Discipline of the U.S. Patent and Trademark Office.

Expires: December 6, 2004

**Harry I. Moatz
Director of Enrollment and Discipline**



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JULY 16, 1999

SAMUELS, GAUTHIER, STEVENS & REPPERT
MATTHEW E. CONNORS
225 FRANKLIN STREET
BOSTON, MA 02110

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SAMUELS, GAUTHIER
& STEVENS LLP



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UNITED STATES PATENT AND TRADEMARK OFFICE
NOTICE OF RECORDATION OF ASSIGNMENT DOCUMENT

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PLEASE REVIEW ALL INFORMATION CONTAINED ON THIS NOTICE. THE INFORMATION CONTAINED ON THIS RECORDATION NOTICE REFLECTS THE DATA PRESENT IN THE PATENT AND TRADEMARK ASSIGNMENT SYSTEM. IF YOU SHOULD FIND ANY ERRORS OR HAVE QUESTIONS CONCERNING THIS NOTICE, YOU MAY CONTACT THE EMPLOYEE WHOSE NAME APPEARS ON THIS NOTICE AT 703-308-9723. PLEASE SEND REQUEST FOR CORRECTION TO: U.S. PATENT AND TRADEMARK OFFICE, ASSIGNMENT DIVISION, BOX ASSIGNMENTS, CG-4, 1213 JEFFERSON DAVIS HWY, SUITE 320, WASHINGTON, D.C. 20231.

RECORDATION DATE: 05/13/1999

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BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).

ASSIGNOR:

JOANNOPOULOS, JOHN D.

DOC DATE: 05/05/1999

ASSIGNOR:

FAN, SHANHUI

DOC DATE: 05/05/1999

ASSIGNOR:

WINN, JOSHUA N.

DOC DATE: 05/05/1999

ASSIGNOR:

FINK, YOEL

DOC DATE: 05/05/1999

ASSIGNEE:

MASSACHUSETTS INSTITUTE OF
TECHNOLOGY
77 MASSACHUSETTS AVENUE
CAMBRIDGE, MASSACHUSETTS 02139

SERIAL NUMBER: 09253379
PATENT NUMBER:

FILING DATE: 02/19/1999
ISSUE DATE:

9945/0235 PAGE 2

KIMBERLY WHITE, EXAMINER
ASSIGNMENT DIVISION
OFFICE OF PUBLIC RECORDS

RECORDATION FORM COVER SHEET

05-18-1999

HONORABLE COMMISSIONER OF
PATENTS AND TRADEMARKS
WASHINGTON, D.C. 20231

SIR:

NOV 17 2004

101040179

CPR/FINANCE

PLEASE RECORD THE ATTACHED ORIGINAL DOCUMENT(S) OR COPY(IES) THEREOF.

1. NAME OF CONVEYING PARTY(IES)

John D. Joannopoulos
Shanhui Fan
Joshua N. Winn
Yoel Fink

Additional name(s) of conveying party(ies) attached? No

2. NAME(S) AND ADDRESS(ES) OF RECEIVING PARTY(IES)

Massachusetts Institute of Technology
77 Massachusetts Avenue
Cambridge, Massachusetts 02139

Additional name(s) of receiving party(ies) attached? No

3. NATURE OF CONVEYANCE

- ☒ Assignment
☐ Security Agreement
☐ Merger
☐ Change of Name
☐ Other

Execution Date:

05/05/99

4. APPLICATION NUMBER(S) OR PATENT NUMBER(S)

If this document is being filed together with a new application, the execution date of the application is: _____

A. Patent Application No(s): 09/253,379

B. Patent No(s): _____

Additional numbers attached? No

5. NAME AND ADDRESS OF PARTY TO WHOM
CORRESPONDENCE CONCERNING DOCUMENT
SHOULD BE DIRECTED:Matthew E. Connors
Samuels, Gauthier, Stevens & Reppert
225 Franklin Street
Boston, Massachusetts 02110
(617) 426-9180, Extension 1126. TOTAL NUMBER OF APPLICATIONS
AND PATENTS INVOLVED: 1

7. TOTAL FEE DUE: \$40.00 (Enclosed)

If any additional fee(s) are due, the Commissioner is hereby
authorized to charge the Deposit Order Account noted in item 8.

8. DEPOSIT ACCOUNT NUMBER: 19-0079

05/17/1999 JSHABAZZ 00000090 09253379

9. STATEMENT AND SIGNATURE

01 PC:581

To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy
of the original document.Matthew E. Connors
Name of Person SigningMatthew E. Connors
Signature5/10/99
Date

Total number of pages including cover sheet, attachments, and document: 5

I hereby certify that this paper (along with any paper referred to as being attached or enclosed) is being
deposited with the United States Postal Service on the date shown below with sufficient postage as first
class mail in an envelope addressed to the Commissioner of Patents and Trademarks, Washington, D.C.
20231.

Deborah M. Costello

Deborah M. Costello

Date: 5-10-99

ASSIGNMENT

Know all men by these presents that:

WHEREAS we, John D. Joannopoulos
64 Douglas Road
Belmont, MA 02178

and

Shanhui Fan
50 Porter Street
Somerville, MA 02143

and

Joshua N. Winn
16 Josephine Avenue #2
Somerville, MA 02144

and

Yoel Fink
60 Wadsworth Street, Apt. 22E
Cambridge, MA 02142

have made an invention for

HIGH OMNIDIRECTIONAL REFLECTOR

described in the application filed with the United States Patent and Trademark Office on February 19, 1999, as Serial No. 09/253,379, which claims priority from United States Provisional Patent Application Serial No. 60/075,223, filed February 19, 1998; and

WHEREAS Massachusetts Institute of Technology a corporation duly organized and existing under the laws of Massachusetts and having a place of business at 77 Massachusetts Avenue, Cambridge, MA 02139, for the benefit of itself, its successors and assigns, all inclusively hereinafter referred to as the Assignee, is desirous of acquiring the entire right, title and interest in and to the said invention, the said application, all inventions disclosed in said application and any and all Letters Patent of the United States and of all other countries which may be granted for the said invention or inventions, or any of them;

NOW, THEREFORE, for good and valuable consideration provided by said Assignee, the receipt whereof is hereby acknowledged, we do hereby sell, assign and transfer to the said Assignee the entire right, title and interest in and to the said invention, inventions and application, including all priority rights arising therefrom, all inventions disclosed in said application, and any and all Letters Patent of the United States, and of all other countries, together with the right to apply for such Letters Patent, which may be granted for the said invention, inventions or any of them,

TO HAVE, HOLD AND ENJOY the said invention, the said application, and the said Letters Patent, to said

Massachusetts Institute of Technology

its successors and assigns, to its and their own use and behoof to the full end of the term or terms for which the said Letters Patent may be granted, as fully and entirely as the same would have been held and enjoyed by us had this assignment and sale not been made.

AND we hereby authorize and request the Commissioner of Patents of the United States and the appropriate officers of all foreign patent offices to issue any and all Letters Patent which may be granted on the said application or applications above referred to, or for the said invention, or any of them, to the said Assignee in accordance with the terms of this instrument.

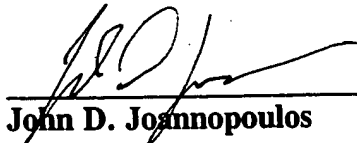
AND we hereby agree to execute and sign without further consideration any other legal document and any other assignments and any divisional, continuing, renewal, reissue or other application in and for all patents that may be appropriate and may be deemed necessary by the Assignee fully to secure to said Assignee its interests as aforesaid in and to the said invention or any part thereof and in and to the said patents or any of them.

AND we further covenant and agree that we will at any time upon request communicate to the said Assignee, its successors, assigns or other legal representatives, any facts known to us relating to the said invention and any patent that may be granted thereon, and will testify as to the same in any interference or litigation when requested to do so.

AND we hereby covenant for ourselves and our legal representatives that we have not hitherto assigned or granted any license to make, use or sell said invention, and that we will not henceforth purport to assign, license or execute any instrument to that effect in conflict with this assignment.

IN WITNESS WHEREOF, we have hereunto set our hands and seals on the dates below.

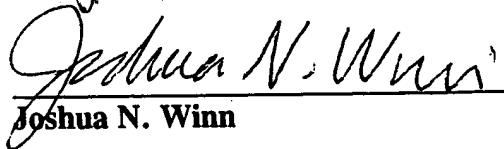
5 May 99
Date


John D. Joannopoulos


5 May 99
Date


Shanhui Fan

5 May 99
Date


Joshua N. Winn

5/5/99
Date


Yoel Fink

I hereby certify that this paper (along with any paper referred to as being attached or enclosed) is being deposited on the date shown below in an envelope as "Express Mail Post Office to Addressee" Mailing Label Number EM US addressed to the: Commissioner of Patents and Trademarks, Washington, D.C. 20231.


Deborah M. Costello

Date: 5-10-99